

REMARKS

In view of the following remarks, the Examiner is requested to withdraw the rejections and allow Claims 1-30, the only claims pending and currently under examination in this application.

Claims 29 and 30 have been amended for clarification. Support for these amendments can be found in the original claims, as well as in the specification for example on p. 6, lines 3-7. As such, no new material is added by way of these amendments.

35 USC § 102

Claim 29 has been rejected under 35 U.S.C. § 102(e) as being anticipated by Bjornson et al. US 6,284,113. This rejection is respectfully traversed.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631, (Fed. Cir. 1987).

The standard for anticipation under section 102 is one of strict identity. An anticipation rejection requires a showing that each limitation of a claim be found in a single reference, *Atlas Powder Co. v. E.I. DuPont de Nemours & Co.*, 224 U.S.P.Q. 409, 411 (Fed. Cir. 1984). Further, an anticipatory reference must be enabling, see *Akzo N.V. v. United States Int'l Trade Comm'n* 808 F.2d 1471, 1479, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986), cert denied, 482 U.S. 909 (1987), so as to place one of ordinary skill in possession of the claimed invention. To anticipate a claim, a prior art reference must disclose every feature of the claimed invention, either explicitly or inherently. *Glaxo v. Novopharm, Ltd.* 334 U.S. P.Q.2d 1565 (Fed. Cir. 1995).

Claim 29 as currently amended requires a depot member comprising a plate with a plurality of wells each having a first end and an opening at a second end, wherein each well includes a deformable wall portion at the first end, wherein said deformable wall portion is configured such that when said deformable wall portion of each well is

inwardly deformed while liquid is in the well the liquid will be displaced from the well to form a convex meniscus swelling from the opening.

The Examiner has alleged that the portion of the claim directed to the water is considered intended use for the water, and is not considered an element of the device. (Office Action, p. 5). The Applicants respectfully disagree, however, Claim 29 has been amended to clarify that the deformable wall portion is an element of the device. The deformable wall portion of Claim 29 is configured such that when the deformable wall portion is inwardly deformed while liquid is in the well the liquid will be displaced from the well to form a convex meniscus swelling from the opening. Since Bjornson et al. fail to teach this element, Bjornson fails to anticipate Claim 29.

The Examiner also alleges that Bjornson discloses transfer element 622 is employed to transfer liquid from the aperture in the same manner as the disclosed deformable cantilevered beam tip that displaces liquid as taught at column 10, lines 16-32 (Office Action, p. 2). The Applicants maintain, however, as in the previous response, that Bjornson et al. do not teach a deformable wall portion at the first end. The Examiner has not pointed to where the cantilevered beam tip is a deformable portion of the wall. Furthermore, transfer element 622 is disclosed in Bjornson as "the transfer elements comprises an aperture in the plate where the aperture is capable of being electrically activated" (abstract). The Examiner has not pointed to how transfer element 622, which comprises an aperture in the plate, is a deformable portion of the wall. Since the neither the cantilevered beam tip nor transfer element 622 is a deformable portion of the well wall, configured such that liquid will be displaced from the well when the deformable wall portion of the well is inwardly deformed, Bjornson et al. fail to anticipate Claim 29.

Because Bjornson et al. fail to teach this element of Claim 29, the Applicants respectfully request that the rejection of Claim 29 under 35 U.S.C. § 102 (e) be withdrawn.

Claims 29-30 were rejected under 35 U.S.C. 102(e) as being anticipated by Madden et al. (US 6,783,732). This rejection is respectfully traversed.

Claim 29 as currently amended requires a depot member comprising a plate with a plurality of wells each having a first end and an opening at a second end, wherein each well includes a deformable wall portion at the first end, wherein said deformable wall portion is configured such that when said deformable wall portion of each well is inwardly deformed while liquid is in the well the liquid will be displaced from the well to form a convex meniscus swelling from the opening.

The Examiner continues to allege that although Madden is silent as to the device being deformable, the term deformable is interpreted to mean the device is elastic, bendable, flexible. The Examiner alleges that as the entire device is made of an elastic material as such it is inherent that the entire device is somewhat deformable (Office action, p. 2), and therefore Madden anticipates the current invention.

The Applicants respectfully disagree. The Applicants again point out that the cited portion of Madden reads as follows: "The plates of the microfiltration apparatus may be constructed of any substantially rigid, water insoluble, fluid-impervious material....The term "substantially rigid" as used herein is intended to mean that the material will resist deforming or warping under a light mechanical or thermal load, although the material may be somewhat elastic" (col. 11 lines 66-col. 12 line 6).

Madden, therefore, discloses the plates as "substantially rigid" and furthermore, the Examiner has not identified where it is taught in Madden et al. that each well includes a deformable wall portion at the first end configured such that when the deformable wall portion is inwardly deformed while liquid is in the well the liquid will be displaced from the well to form a convex meniscus swelling from the opening. The device depicted in Figure 2 of Madden et al. does not include wells with a deformable wall portion. Madden et al. are silent with respect to the deformation of a well wall during the operation of the device depicted in Figure 2 shown below:

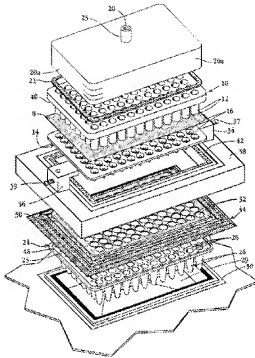


Fig. 2

As such, Madden et al. fail to teach the above listed element of Claim 29.

Claim 30 requires a depot member comprising a plate with a plurality of wells each having an opening at a second end and a vent at a first end positioned away from said opening, wherein the vent is covered by a membrane that is permeable to a displacing fluid, and wherein said depot member is configured such that when displacing fluid is introduced through the membrane and vent while liquid is in the well the liquid will be displaced from the well to form a convex meniscus swelling from the opening.

As the Applicants understand it, the Examiner has asserted the drip plate 16 of Madden can be considered to be a "well". (Office Action, p. 3) The Examiner has alleged that Madden et al. disclose a drip plate 16 with multiple wells, each having an open end 16c and an opposite vent hole covered by filter element 8a (permeable membrane, see figure 4) (Office Action of 11/15/2007, p. 3) as shown in Fig. 4 of Madden. below:

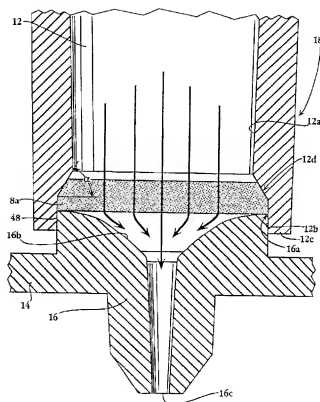


Fig. 4

The Examiner therefore alleges that Madden contains all the elements of Claim 30.

However, the Applicants respectfully disagree. The top portion of drip plate 16 covered by filter element 8a of Madden, which the Examiner is equating to the vent of the current claims, is designed to create a negative pressure with application of a vacuum (see col. 18, lines 50-53, and col. 22, lines 23-26). The top portion of drip plate 16 covered by filter element 8a of Madden is not designed for the introduction of a displacing fluid into the well containing the liquid to be transferred. The depot member comprising the vent covered by a membrane in the present case is configured for the passage of a displacing fluid, such that when a displacing fluid (element 126 in Fig. 6B, below) is introduced through the membrane and vent while liquid is in the well the liquid will be displaced from the well to form a convex meniscus swelling from the opening.

The elements of Claim 30 are shown in Figure 6B below:

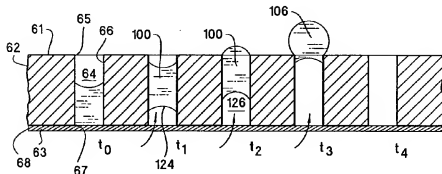


Fig. 6B

Nowhere does Madden et al. teach the element of a vent covered by a membrane permeable to a displacing fluid, wherein the depot member is configured such that when the displacing fluid is introduced through the membrane and vent while liquid is in the well the liquid will be displaced from the well to form a convex meniscus swelling from the opening. Therefore, as Madden does not teach all the elements of Claim 30, Madden does not anticipate the claim.

Accordingly, the Applicants respectfully request that the rejection of Claims 29-30 over Madden, et al. under 35 U.S.C. § 102(e) be withdrawn.

Claim Rejection – 35 USC § 103

Claim 28 was rejected under 35 U.S.C. 103(a) as being obvious over Bjornson et al. as applied to Claims 1-5, 10-14, 16-27 and 29, and in further view of Madden et al. This rejection is respectfully traversed.

In order to meet its burden in establishing a rejection under 35 U.S.C. §103, the Office must first demonstrate that a prior art reference, or references when combined, teach or suggest all claim elements. See, e.g., *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740 (2007); *Pharmastem Therapeutics v. Viacell et al.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007); *MPEP* § 2143(A)(1). In addition to demonstrating that all elements

were known in the prior art, the Office must also articulate a reason for combining the elements. See, e.g., KSR at 1741; *Omegaflex, Inc. v. Parker-Hannifin Corp.*, 243 Fed. Appx. 592, 595-596 (Fed. Cir. 2007) citing KSR. Further, the Supreme Court in KSR also stated that that "a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions." KSR at 1740; emphasis added. As such, in addition to showing that all elements of a claim were known in the prior art and that one of skill had a reason to combine them, the Office must also provide evidence that the combination would be a predicted success.

Claim 28 is a depot having a plurality of wells, and at least one receptacle such that liquid displaced through the well openings contacts the receptacle at the orifice; wherein each well comprises a vent positioned away from the opening, and the liquid-displacing means comprise means for introducing a displacing fluid through the vents and into the wells; wherein the vent is covered by a membrane that is permeable to the displacing fluid.

The Examiner has stated that Bjornson, et al. do not disclose employing a permeable membrane. However, as the Applicants have stated and the Examiner has confirmed, Bjornson et al. also fail to disclose a device in which the liquid displaced contacts the receptacle at the orifice, as required by the rejected claims (Office Action, p. 2). In other words, Claim 28 recites "means for moving the well openings and the at least one receptacle into proximity such that liquid displaced through the well openings contacts the receptacle at the orifice". Since this element is not disclosed by Bjornson, Bjornson fails to teach all the elements of Claim 28.

Madden et al. was cited solely for disclosing a multiwell arrangement and in one embodiment, that the vacuum pathways pass through the plane of the collection-tray upper surface by way of the vents that traverse the collection tray proximate each of said collection wells (according to column 6, line 35+). However, since Bjornson et al. fail to teach or suggest all the elements of Claim 28, the addition of Madden fails to remedy this deficiency.

In view of the above, the Applicants contend that a prima facie case of obviousness has not been established because the combination of Bjornson and

Madden fails to teach or suggest all the claimed limitations. As such, Applicants respectfully request that the rejection of Claim 28 under 35 U.S.C 103 (a) be withdrawn.

Claims 1-14 and 17-29 are rejected under 35 U.S.C. 103(a) as being obvious over Hasskamp et al. (U.S. 4,537,231) in view of Madden et al.

An element of the rejected claims is a method for transferring liquids from a plurality of wells having openings arranged in a selected format to at least one receptacle. The claimed method includes displacing liquid in each well so that a convex meniscus swells from the opening, and contacting an orifice of a receptacle with the swollen meniscus to draw at least a portion of the liquid into the receptacle.

The Examiner has cited the dispenser apparatus as disclosed in Hasskamp, et al. as anticipating the current claims, however has stated that Hasskamp does not specify touch off dispensing when dispensing to wells, and cites Madden et al. for disclosing a touch off operation.

However, the Applicants respectfully disagree. Hasskamp indeed does not disclose the element of a convex meniscus swelling from the opening of the well, as in Claim 29, nor does Hasskamp disclose contacting an orifice of a receptacle with a swollen meniscus to draw at least a portion of the liquid into the receptacle as in Claim 1, or the element wherein liquid displaced through the well openings contacts the receptacle at the orifice as in Claims 21 and 28. Therefore, Hasskamp does not teach all the elements of the rejected claims, and accordingly does not anticipate the current claims.

Furthermore, Hasskamp does not suggest this element, because the cited example in Hasskamp is entirely directed to a method of dispensing equal volumes of liquid into wells of a tray (col. 3, lines 7-10). The valve means in Hasskamp "incorporates the necessary orifices and delays to prevent rapid movement of the diaphragm portions which might result in splashing of the liquid" (col. 4, lines 47-50) and "the diaphragm portions remain well spaced from the liquid to preclude contamination of the diaphragm due to a slight splashing or sloshing" (col. 4, lines 59-61). There is no suggestion of a method for transferring liquids from a plurality of wells to at least one

receptacle, comprising contacting an orifice of a receptacle with the swollen meniscus to draw at least a portion of the liquid into the receptacle.

Hasskamp also does not teach a permeable membrane, as the Examiner has confirmed. Hasskamp further does not suggest this element, because as above, the diaphragm in Hasskamp is "preferentially made of synthetic rubber" (col. 3, lines 45-46). There would therefore be no reason for one of skill in the art to combine the methods of Hasskamp with a permeable membrane.

The addition of Madden fails to make up for this deficiency. Madden, et al. was cited for disclosing a permeable membrane, and for disclosing touch off dispensing when dispensing to wells. However, the Applicants maintain that the method disclosed in Madden does not, as the Examiner suggests, contain the element of contacting an orifice of a receptacle with the swollen meniscus to draw at least a portion of the liquid into the receptacle as in the current claims. Madden does not disclose this element because, as the Examiner has cited, "the drip director outlet regions simultaneously abut inner sidewalls of a plurality of corresponding collection walls" (col. 10, lines 33-35, and Figs 9A-9C). In other words, the drip director in Madden contacts the inner sidewalls in the process of fluid delivery. This is in contrast to the current claims, wherein the swollen meniscus, and not any part of the depot, contacts the orifice of a receptacle, i.e., "the liquid transfer is effected directly from the depots to the corresponding receptacles without contact between depots and the receptacles, and without interposition of any transfer device between depots and the receptacles" (p. 4, lines 1-3)

In view of the above, the Applicants contend that a prima facie case of obviousness has not been established because the combination of Hasskamp and Madden fails to teach or suggest all the claimed limitations. Consequently, the Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 1-14 and 17-29 be withdrawn.

Claim 15 was rejected under 35 U.S.C § 103(a) as being obvious over Hasskamp in view of Madden et al. as applied to Claims 1-5, 10-14, 17-27, and 29, and further in view of Churchill et al.

The Examiner states that Hasskamp in view of Madden, et al. do not disclose employing a heat dispensing actuator. However, as stated above, the combination of Hasskamp and Madden et al. fail to teach or suggest all the elements of the rejected claims, namely, displacing liquid in each well so that a convex meniscus swells from the opening, and contacting an orifice of a receptacle with the swollen meniscus to draw at least a portion of the liquid into the receptacle.

As Churchill et al. was cited solely for disclosing that other types of dispensers and valve actuation devices exist and may be used, Churchill et al. fail to make up for the fundamental deficiency of Hasskamp and Madden.

Accordingly, because the combination of Hasskamp and Madden fails to teach or suggest all the elements of the rejected claims, Churchill et al. fail to make up for this deficiency. As such, the Applicants respectfully request that the rejection of Claim 15 under 35 U.S.C. § 103(a) be withdrawn.

Claim 16 was rejected under 35 U.S.C § 103(a) as being obvious over Hasskamp in view of Madden et al. as applied to Claims 1-14, 17-27, and 29, and further in view of Bjornson et al.

The Examiner states that Hasskamp in view of Madden, et al. do not disclose employing a piezoelectric actuator. However, as stated above, the combination of Hasskamp and Madden et al. fail to teach or suggest all the elements of the rejected claims, namely, displacing liquid in each well so that a convex meniscus swells from the opening, and contacting an orifice of a receptacle with the swollen meniscus to draw at least a portion of the liquid into the receptacle.

As Bjornson et al. was cited solely for disclosing a dispensing device that employs piezoelectric activation so that picoliter and nanoliter droplets can be delivered, Churchill et al. fail to make up for the fundamental deficiency of Hasskamp and Madden.

Accordingly, because the combination of Hasskamp and Madden fails to teach or suggest all the elements of the rejected claims, Churchill et al. fail to make up for this deficiency. As such, the Applicants respectfully request that the rejection of Claim 15 under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In view of the amendments and remarks above, the Applicants respectfully submit all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Bret Field at (650) 327-3400.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078.

Respectfully submitted,

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